REMARKS/ARGUMENTS

The arguments and amendments presented herein include the arguments and amendments Applicants discussed with the Examiner during a phone interview on September 3, 2010. The Examiner requested Applicants to submit the discussed arguments and amendments for reconsideration, which Applicants present herein. Applicants submit that the arguments and amendments presented herein make the substance of the phone interview of record to comply with 37 CFR 1.133. If the Examiner believes that further information on the interview needs to be made of record to comply with the requirements, Applicants request the Examiner to identify such further information.

Applicants submit that any amendment to the claims herein does not comprise acquiescence or admission that any canceled, amended or supplemented subject matter that existed prior to the amendments herein is not patentable. Applicants reserve the right to pursue claimed subject matter as presented prior to the amendments herein during subsequent prosecution of the present application and in any continuation or related applications.

1.   Amended Claims 29-40 Comply with 35 U.S.C. §101

The Examiner rejected claims 29-40 as directed to non-statutory subject matter (35 U.S.C. §101) on the grounds the claimed "article of manufacture" may cover transmission media.

Applicants amend claim 29 as discussed during the phone interview to recite that the "article of manufacture" comprises "hardware or a combination of hardware and software having code executed to transmit packets, communicate with a packet memory, and perform operations". These added requirements are disclosed in at least paras. 45-47 of the filed Specification. Applicants submit that amending the article of manufacture to comprise statutory subject matter overcomes the Sec. 101 rejection. During the phone interview, the Examiner agreed that such an amendment would overcome then rejection.

Accordingly, Applicants request the Examiner to withdraw the Sec. 101 rejection in view of the claim amendments.

2.   Claims 1--40 are Patentable Over the Cited Art

The Examiner rejected claims 1-40 as obvious (35 U.S.C. §103) over Hassan (U.S. Patent No. 7,280,542) in view of Verplanken (U.S. Patent No. 6,038,592) and Roy (U.S. Patent No. 6,246,682). Applicants traverse for the following reasons.

Amended claims 1, 13, 26, and 29 require receiving a multicast packet to transmit to destination addresses; writing a payload of the multicast packet to at least one packet entry in a packet memory; generating headers for the destination addresses; generating at least one descriptor addressing the at least one packet entry in the packet memory including the payload to transmit to the destination addresses; and generating, for each destination address, at least one indicator, wherein each indicator addresses one descriptor, wherein the indicators for each destination address point to a same set of descriptors to associate the destination addresses with the same set of descriptors, wherein each descriptor identifies at least one packet entry to be provided for the plurality of the destination addresses having indicators addressing the packet entries.

Applicants amend the claims to clarify that each indicator addresses one descriptor, that the indicators for each destination address point to a same set of descriptors to associate the destination addresses with the same set of descriptors, and that each descriptor identifies at least one packet entry to be provided for the destination addresses. These added requirements are disclosed in at least FIGs. 2a and 2b and paras. 19-25 of the filed Specification.

During the phone interview, the Examiner said that amending the claims as discussed above could overcome the cited art and requested Applicants to submit for reconsideration, which Applicants present herein. Applicants submit that the amended claims are patentable over the cited art for the following reasons.

The Examiner recognized that Hassan-Ali fails to teach the pre-amended claim requirement of generating indicators for the destination addresses that indicate a same descriptor, and cited col. 4, line 54 to col. 5, line 24 of Roy to address this shortcoming. (OA3, pg. 6). Applicants traverse with respect to the amended claims which recite generating, for each destination address, at least one indicator, wherein each indicator addresses one descriptor, wherein the indicators for each destination address point to a same set of descriptors to associate the destination addresses with the same set of descriptors, wherein each descriptor identifies at

least one packet entry to be provided for the plurality of the destination addresses having indicators addressing the packet entries.

The cited cols. 4-5 of Roy mention a list of elements and a counter of destinations that should receive data. A pointer is provided to each data element, where the pointers are stored as link lists, called QLFs (Queue Link FIFO), providing a queue of elements. A single data element may be in multiple queues (QLFs) and FIG. 2 shows each QLF queue pointing to different elements.

Applicants traverse because the Examiner has not shown where Roy teaches that the queues of pointers to elements (QLFs) are generated for destination addresses as claimed. Further, the examiner has not shown where Roy teaches that each QLF has indicators or pointers to a same set of descriptors as claimed, and that the descriptors identify packet entries to provide for the destination addresses. In fact, the cited FIG. 2 of Roy teaches away from this claim requirement because in Roy each QLF points to a different set of elements, not a same set of decriptors as claimed.

The Examiner also cited col. 7, lines 1-8, 20-21, and 33-34 of Verplanken to address the shortcomings of Hassan-Ali with respect to the pre-amended claims. Applicants submit that the cited Verplanken does not teach the amended limitation of generating the indicators. The cited col. 7 of Verplanken mentions that a buffer chaining control block (BCCB) which contains information relating to buffer chaining in a message and a message chaining control block (MCCB) containing information relating to the message chaining. An offset field indicates the beginning of the data in the buffer and a message count field gives the number of bytes used in the message.

Although the cited Verplanken discusses information maintained for a message, this does not teach generating an indicator for each destination address, wherein the indicators for each destination address point to a same set of descriptors to associate the destination addresses with the same set of descriptors.

Thus, even if one were to combine the teachings of the different references as the Examiner proposes, the cited combination does not render obvious amended claims 1, 13, and 29 because the cited combination does not teach or suggest all the claim limitations for which it is recited. Accordingly, claims 1, 13, 26, and 29 are patentable over the cited combination.

Claims 2-12, 14-25, 27, 28, and 30-40 are patentable over the cited art because they depend from one of claims 1, 13, 26, and 29, respectively. Further, the following dependent claims provide additional grounds of patentability over the cited art for the following reasons.

Claims 2, 14, 27, and 30 depend from claims 1, 13, 26, and 29, respectively, and further require that the payload is written to multiple packet entries in the packet memory, wherein one descriptor is generated for each packet entry including the payload, and wherein one indicator is generated for each descriptor and destination address to which the payload in the packet entry addressed by the descriptor is transmitted

The Examiner cited the above discussed col. 11, lines 25-28 and 44-48 of Hassan-Ali as teaching the claim requirement that one descriptor is generated for each packet entry including the payload, and wherein one indicator is generated for each descriptor and destination address to which the payload in the packet entry addressed by the descriptor is transmitted (OA3, pg. 7) Applicants traverse.

The cited col. 11 mentions that for the MC scheduling operations, leaf index values correspond to N leaf flows associated with a root flow. A linked buffer has an index portion relating to the leaf and root flow index values and a pointer location portion pointing to the cell memory locations, having cells enqueued for an MC service. Hassan mentions that in the MC flow arrangement, a root flow is transmitted to a plurality of egress interfaces using leaf flows, and that a scheduler implements the MC scheduling activity. (Hassan, col. 9, lines 13-25)

Although the cited Hassan discusses a multicast (MC) flow, there is no teaching of the claim requirement that one descriptor is generated for each packet entry including the payload and that one indicator is generated for each descriptor and destination address to which the payload in the packet entry addressed by the descriptor is transmitted. The cited node flows of Hassan do not teach or suggest that there is one indicator for each destination address and descriptor generated for one packet entry.

The cited Verplanken does not address the above discussed deficiencies of Hassan.

Accordingly, claims 2, 14, 27, and 30 provide additional grounds of patentability over the cited art because the additional requirements of these claims are not taught or suggested in the cited combination of references.

Claims 6, 18, and 34 depend from claims 1, 13, and 29, respectively, and further require using, for each destination address and indicator associated with the destination address, the

information on the generated header in the at least one indicator for the destination address to access the header for the destination address; and transmitting, for each destination address and indicator associated with the destination address, the payload from the entry in the packet memory associated with the indicator and the accessed header for the destination address.

The Examiner cited co. 9, lines 12-16 and FIGs. 1 and 4 of Hassan and col. 7, lines 1-8, 20-21, and 33-34 of Verplanken as teaching the requirements of these claims. (OA3, pg. 11) Applicants traverse.

The cited Hassan mentions a multicast (MC) flow arrangement where a root flow entering an ATM switch is transmitted to a plurality of egress interfaces using corresponding leaf flows. The cited Verplanken mentions a buffer chaining control block (BCCB) which contains information relating to buffer chaining in a message and a message chaining control block (MCCB) containing information relating to the message chaining. An offset field indicates the beginning of the data in the buffer and a message count field gives the number of bytes used in the message.

Nowhere do the cited Hassan-Ali, Verplanken, and Roy teach or suggest that for each destination address and indicator associated with the destination address, information on the header in the indicator is used for the destination address to access the header. The Examiner has not cited where Hassan or Verplanken teach that an indicator associated with a destination address, which addresses a descriptor, is used to access the header for the destination address.

Accordingly, claims 6, 18, and 34 provide additional grounds of patentability over the cited art because the additional requirements of these claims are not taught or suggested in the cited combination of references.

Claims 10, 22, and 38 depend from claims 1, 13, and 29, respectively, and further require writing to a local memory at least one handle for each destination address addressing the at least one indicator for the destination address; writing the handles in the local memory to an output queue; and queuing the indicators corresponding to the handles in the output queue to at least one packet queue.

The Examiner cited col. 8, lines 3-5 and 58-60, col. 12, lines 37-39 and 50-56, and FIGs. 5, 9 of Verplanken as teaching the additional requirements of these claims. (OA3, pgs. 16-17)

The cited col. 8 mentions that free indirect control blocks (ICBs) are gathered in a free indirect control queue and that a DSI may read the address of the next direct control block to a

corresponding buffer. The cited col. 12 mentions that in multicast processing, data buffers stored in a data structure in a data store represent a message and that it is not necessary to store the address of the next message, and the directory control blocks may be stored in the CBS and that the indirect control blocks point to the original control block via the MCCB pointer.

Although the cited Verplanken mentions how to store a message, there is no teaching or suggestion of the claim requirement of writing to a local memory a handle for each destination address that addresses an indicator for the destination address, that the handles are queued in an output queue, and that the indicators corresponding to the handles are queued in a packet queue in the output queue. The Examiner has not cited where Verplanken teaches the use of two different queues, one to store handles for each destination address and the other to queue indicators corresponding to the handles in the output queue. Instead, the cited Verplanken mentions buffers and a data structure representing a message. The specific claimed indicators, handles, output queue and packet queue are not taught or suggested in the cited combination.

Accordingly, claims 10, 22, and 38 provide additional grounds of patentability over the cited art because the additional requirements of these claims are not taught or suggested in the cited combination of references.

Conclusion

For all the above reasons, Applicant submits that the pending claims 1-40 are patentable. Should any additional fees be required beyond those paid, please charge Deposit Account No. 50-0585.

The attorney of record invites the Examiner to contact him at (310) 553-7977 if the Examiner believes such contact would advance the prosecution of the case.

Dated: September 8, 2010   By:_____/David Victor/_____

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